

Purpose of and Need for the Proposed Action

1.1 Introduction

Bonneville Power Administration (BPA) is a federal power marketing agency under the U.S. Department of Energy (DOE) that is responsible for marketing electrical power to utility, industrial, and other customers in the Pacific Northwest, pursuant to the Bonneville Project Act of 1937, the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Public Law [PL] 96-501, Northwest Power Act), and other statutes. In addition to marketing power from the federal hydro system in the Pacific Northwest, BPA purchases and markets power from other generation sources in the region to adequately serve its customers, as required by statute. BPA also owns and operates over 15,000 miles of high-voltage transmission lines that move power from generation resources to electric utilities and direct service industries. BPA encourages the development of renewable energy resources in the Pacific Northwest to meet customer demand for power, diversify its resource portfolio, and meet its obligations under the Northwest Power Act.

Deregulation of the electric industry and subsequent energy supply issues have emphasized the need for new and diverse energy sources in BPA's service area, the Pacific Northwest. Renewable resources like wind would not only help diversify BPA's energy resource portfolio, but are preferred by many consumers concerned about environmental effects of other power sources. BPA has marketed output from renewable power projects as "green power" to satisfy demand from these consumers and to increase the amount of renewable energy resources in the region's power supply. The Northwest Power Planning Council's (NWPPC) Fourth Conservation and Electric Power Plan recommended that Northwest utilities offer green power purchase opportunities as a way to help the region integrate renewable resources into the power system in the future.

In February 2001, Washington Winds Inc. (the project developer) submitted a proposal to BPA for a site north of the cities of Sunnyside and Prosser in Washington where wind power facilities could be developed. After considering preliminary information, BPA decided to examine the proposed project and consider purchasing and transmitting power from the project. The project developer also submitted Conditional Use Permit (CUP) applications to Benton and Yakima Counties. Benton County, serving as the lead agency for the State Environmental Policy Act (SEPA), issued a Determination of Significance on June 11, 2001.

The National Environmental Policy Act (NEPA) (42 *U.S. Code* [USC] Section 4231 et seq.) requires federal agencies to prepare and make public an EIS for major federal actions or decisions that could significantly affect the quality of the human environment, including the natural and physical environment.

The Washington State Environmental Policy Act requires that an environmental impact statement be prepared on proposals for legislation and other major actions having a probable significant, adverse environmental impact.

This EIS provides environmental information to the public and to federal, state, and local agencies, officials, and decision-makers regarding the effects of the proposed action. The Final EIS will respond to public and agency comments on this Draft EIS. It may also provide necessary clarifications, elaboration, and revisions to this draft.

BPA will consider the information in this EIS, public comments, and other factors when deciding whether to purchase power from the proposed wind project and transmit it over BPA transmission lines. Benton and Yakima County Planning Departments will consider information in this EIS when deciding whether to grant a CUP and allow the proposed project to be developed.

1.2 Need for Action

The action proposed by BPA is to: (1) execute a 20-year power purchase agreement with the project developer for up to 50 average megawatts (aMW¹) (up to about 200 megawatts [MW]) of electrical energy from the proposed Maiden Wind Farm; and (2) execute construction and generation interconnection agreements with the project developer to integrate the power generated by the proposed Maiden Wind Farm into BPA's transmission system. The need for the proposed action arises primarily from BPA's statutory obligations and planning directives. BPA may or may not ultimately execute agreements for this project, depending on considerations described below.

BPA may need to acquire additional power generation resources. As used in this EIS, the term "acquiring resources" means the same as acquiring power from generation resources. Because BPA does not actually have the authority to construct or own generation resources, BPA's "acquisition of resources" is limited to acquiring power from generation resources. Use of this term in this manner is consistent with the use of this term in the Northwest Power Act and other relevant statutes. In order to comply with the Northwest Power Act, the President's National Energy Policy, and BPA's own planning documents, BPA may need to acquire wind and other renewable power resources. The proposed action would respond to three basic needs as described in the following sections.

1.2.1 Need for Additional Power Generation Resources

The Northwest Power Act directs BPA to acquire sufficient resources to meet the electric power requirements (i.e., loads) of its customers (16 USC Section [§] 839d[a][2]). BPA expects its regional load obligations will grow over the next ten years, but the extent to which this occurs depends on several factors. For example, the amount of load that direct service industries (mainly aluminum plants) will place on BPA in the future is uncertain. Another major factor will be the result of a Pacific Northwest "Regional Dialogue" regarding the role BPA should play in acquiring power from the market to meet federal loads. BPA's most recently published load and generation forecasts project that there will be a firm load of about 9,360 aMW on the federal system in the Pacific Northwest by 2010, based on a medium forecast of electricity consumption. At the same time, it is projected that about

¹ Average MW or "aMW" indicates the average amount of energy supplied over a specified period of time, in contrast to "MW," which indicates the maximum or peak output that can be supplied for a short period. Wind projects only generate power when the wind is sufficient to operate the turbines. In general, wind projects operate about one-quarter to one-third of the time (it varies in different locations), so a wind project with a capacity of 150 to 200 MW would generate *about* 50 aMW.

8,090 aMW of power generation from federal system firm resources (after subtracting transmission losses) will exist by 2010 for BPA to serve this load, which results in a projected federal firm energy deficit of approximately 1,270 aMW by 2010. On a region-wide basis, it is projected that there will be a firm load of about 23,870 aMW by 2010, again based on a medium forecast of electricity consumption. Because it is projected that there will be about 19,690 aMW of regional firm resources (after subtracting transmission losses) by 2010, BPA projects that there will be a regional firm energy deficit of approximately 4,180 aMW by 2010 (BPA, *Pacific Northwest Loads and Resources Study*, 1999). In addition, the NWPPC has forecasted that an additional 3,000 MW of electrical capacity will be required in the Pacific Northwest power system by 2003 for BPA to adequately serve its customers (NWPPC, 2000). Furthermore, BPA's existing energy resource base, which consists primarily of hydroelectric power, is facing increasing constraints as operations are being altered to incorporate long-term goals of salmon recovery in the Columbia River Basin. To meet the congressional mandate of the Northwest Power Act, BPA may need to acquire additional non-hydroelectric power generation resources.

1.2.2 Need for Acquisition of Power from Renewable Resources

In the Northwest Power Act, Congress established that development of renewable resources should be encouraged in the Pacific Northwest (16 USC § 839[1][B]). The Act directs the BPA Administrator to acquire renewable resources to the maximum extent practicable (§ 839d[e][1]). Wind power is defined as a renewable resource by the Act (§ 839a[16]). The Act also requires that acquisition of new power resources by BPA be consistent with the NWPPC's Northwest Power Plan (§ 839b[d][2]) unless BPA's Administrator finds that acquiring a resource inconsistent with the Plan is needed to meet the Administrator's obligations under the Northwest Power Act (§ 839d[c][3][A]). The purpose of this Plan is to "set forth a general scheme for implementing conservation measures and developing resources" (§ 839b[e][2]). The Plan gives priority first to conservation, second to renewable resources, and then to other resources such as combustion turbine generation (§ 839b[e][1]). The proposed action may be needed to ensure consistency with these congressional directives. It is important to note that the NWPPC is presently embarking on an effort to update and revise the Power Plan, and this may result in a change of direction regarding new resources.

In addition, the proposed action is consistent with the goals of the President's National Energy Policy. A primary goal of that policy is to add power supply in the U.S. from diverse energy sources (National Energy Policy Development Group, May 2001). The Policy clearly states that making greater use of non-hydroelectric renewable sources (e.g., wind, biomass, and geothermal) is needed to meet this goal.

Furthermore, the proposed action may be needed to implement the renewable resource goals of BPA's Resource Programs, Business Plan, and Power Business Line (PBL) Strategic Plan. The BPA Administrator has chosen to implement the Emphasize Conservation Alternative from BPA's Resource Programs EIS (RPEIS) (BPA, 1993). This alternative contemplates development of 480 aMW of energy from new renewable resources by 2010, in addition to acquiring conservation and efficiency improvements. For the Business Plan, the BPA Administrator has chosen to implement the Market-Driven Alternative from BPA's Business Plan EIS (BPEIS) (BPA, 1995). This alternative was chosen for BPA's Business Plan

in part to best meet BPA's expected long-term load obligations. Although the Business Plan emphasizes spot market power purchases to meet short-term obligations, the Plan supports the acquisition of renewable resources, and lays the foundation for subsequent decisions by BPA to foster the development of renewable resources to meet long-term power demand (BPA, *Business Plan 1995*, DOE/BP-2664, Aug. 1995). Finally, in response to its obligations under the Northwest Power Act and customer demand for "green" power, BPA's PBL Strategic Plan Update identifies an objective of increasing the amount of wind and other renewable energy resources in BPA's renewable energy portfolio (BPA, 2002). The amount of additional wind that BPA ultimately acquires will depend on the market price of alternative resources; the operational ability of the federal power system to absorb wind resources; transmission cost and physical restraints; costs of shaping wind energy to meet loads; net revenue from green power sales; and other factors. Thus, the proposed action may be needed to ensure consistency with these planning documents.

1.2.3 Need for Acquisition of Power from Wind Resources

Acquisition of wind power may be needed to comply with BPA's statutory obligations under the Northwest Power Act. As discussed above, BPA must act consistently with the NWPPC's Northwest Power Plan, which gives priority first to conservation, second to renewable resources, and then to other resources (§ 839b[d][2]; § 839b[e][1]). Over the last decade, plans have been put in place to maximize conservation efforts in the Pacific Northwest. It is therefore necessary to now give priority to renewable resources. Geothermal power, biomass, and other renewables other than wind power have been or are being acquired to the maximum extent practicable, and BPA may need to acquire wind power resources to be consistent with the Northwest Power Plan. In addition, the President's National Energy Policy identifies diversification of the nation's power supply as a primary goal. Acquisition of power from wind resources conforms with this direction.

1.3 Purposes of Action

The purposes (i.e., objectives) of the proposed action are to:

- Acquire wind power to fulfill BPA's obligations under the Northwest Power Act regarding the acquisition of additional power generation resources and development of renewable energy resources
- Further the objectives of the President's National Energy Policy to diversify energy sources by making greater use of non-hydroelectric renewable sources such as wind power
- Protect BPA and its customers against risk of power outages by diversifying BPA's energy supplies
- Meet growing customer demand for energy from renewable energy resources
- Ensure consistency with the resource acquisition strategy of BPA's Resource Programs and Business Plan

- Further the objective of BPA's PBL Strategic Plan to increase the amount of renewable energy resources under contract and to evaluate issues of integration and operation of wind resources
- Respond to the project developer's application to BPA for the purchase and transmission of power generated by wind turbines at the proposed Maiden Wind Farm site.

1.4 Decisions to be Supported by the EIS

This EIS will be used to support decisions by the lead agencies concerning the proposed Maiden Wind Farm. BPA, the federal lead agency, will use the EIS to assist in its decision whether to: (1) execute a 20-year power purchase agreement for up to 50 aMW of electrical energy from the proposed project; and (2) execute construction and generation interconnection agreements to integrate power into BPA's transmission grid. Benton County Planning and Building Department, the state lead agency, will use the EIS in deciding whether to grant a CUP for the proposed project, as well as necessary construction-related permits.

Because a portion of the proposed project is located in Yakima County, the project developer has applied for a CUP from Yakima County as well. The EIS may be used by Yakima County in deciding whether to grant this permit.

This EIS may also be used by other responsible agencies in making decisions whether to issue necessary permits and approvals for the proposed project. Permits and approvals required for the Maiden Wind Farm to be built are listed in Table 1.4-1.

TABLE 1.4-1
Permits and Approvals Required for the Proposed Project

Agency	Permit	Reason for Permit
U.S. Army Corps of Engineers	Clean Water Act Section 404 Nationwide Permit	Installation of road and underground cable crossings of intermittent streams
Federal Aviation Administration	Notice of Construction or Alteration	Review of turbine height and lighting
Washington State Department of Ecology	National Pollutant Discharge Elimination System Stormwater General Permit 1200-C	Erosion control
Washington State Department of Ecology	Water Quality Certification	Issued in conjunction with U.S. Army Corps of Engineers Nationwide Permit through the Joint Aquatic Resources Permit Application (JARPA)
Washington State Department of Ecology	Sand and Gravel Permit	Development of quarry sites
Washington State Department of Natural Resources	Lease Agreement	Construction and operation of project on land owned by the state
Washington State Department of Natural Resources	Surface Mining Permit	Development of quarry sites

TABLE 1.4-1
Permits and Approvals Required for the Proposed Project

Agency	Permit	Reason for Permit
Benton County Planning and Building Department	Conditional Use Permit	Construction and operation of project on land zoned for Growth Management Act (GMA) Agriculture and development of quarry sites
Benton County Planning and Building Department	Mineral Resource Extraction Permit	Development of quarry sites
Benton County Department of Public Works	Encroachment Permit	Access from new private roads onto county roads
Benton County Department of Public Works	Franchise Agreement	Installation of underground cable within county right-of-way
Benton County Planning and Building Department	Building Permit	Construction of turbines, substations, and operation and maintenance (O&M) buildings
Benton Clean Air Authority	Notice of Construction	Construction of turbines, substations, O&M buildings, and quarries
Benton-Franklin District Health Department	Septic System Permit	Construction and operation of O&M building septic system
Yakima County Planning Department	Conditional Use Permit	Construction and operation of project on land zoned for Agriculture
Yakima County Public Works Department/Permit Services Office	Building Permit	Construction of turbines, substations, and O&M buildings
Yakima County Public Works Department/Permit Services Office	Road Approach Permit	Access from new private roads onto county roads

1.5 Relationship to Other Environmental Documents

This EIS is tiered to BPA's RPEIS and BPEIS, both of which are broader, programmatic documents. The RPEIS evaluates the environmental impacts and trade-offs of alternative combinations of generic resource types that could be developed, while the BPEIS addresses the environmental effects of alternative policies for implementing BPA's Business Plan. Tiering of this EIS to the RPEIS and BPEIS is consistent with 40 *Code of Federal Regulations* (CFR) 1502.20 and 1508.28, and with the strategy for tiering environmental analyses for site-specific actions such as the proposed Maiden Wind Farm that is documented in both the RPEIS and BPEIS.

As discussed in Section 1.2 of this EIS, the BPA Administrator has chosen to implement the Emphasize Conservation Alternative from the RPEIS and the Market-Driven Alternative from the BPEIS. The proposed action for this EIS is a site-specific action that is consistent with the alternatives adopted by BPA in its Records of Decision (RODs) for the Resource Programs and Business Plan. Pursuant to 40 CFR 1502.20, this EIS focuses on the issues specific to the Maiden Wind Farm; broader issues (such as developing alternative power resources) were addressed in the programmatic documents and thus are not the subject of this EIS.

Because this EIS is tiered to the RPEIS and BPEIS, this EIS incorporates by reference relevant information from these programmatic EISs and summarizes this information as appropriate. Both the RPEIS and BPEIS are available for review at BPA's headquarters in Portland, Oregon.

1.6 Scoping and Major Issues

On June 12, 2001, BPA published a Notice of Intent to prepare an EIS and to conduct public scoping for the proposed project. Scoping is a process in which the public is invited to express opinions on which issues should be considered in an EIS. BPA developed a mailing list of persons, agencies, and organizations that would likely be interested in or affected by the proposed project.

On June 11, 2001, letters were mailed to everyone on the mailing list describing the project, the environmental analysis process, and how to participate. A public scoping meeting was held on June 26, 2001, at the Prosser Senior Center in Benton County. Written and verbal comments were collected from those who attended the meeting.

Many issues were raised during the scoping process. The primary concerns were related to the following issues:

- Impacts to birds, other wildlife, and vegetation, including the introduction of noxious weeds and the loss of shrub-steppe habitat
- How this project would impact the overall need for and cost of power in the region
- The impact of the project on the view of the hillside.

Comments received during scoping were considered by resource scientists and specialists throughout preparation of the environmental impact analyses and are addressed in this EIS.

Everyone on the mailing list will receive notice when the Draft EIS is available, including instructions on how to comment on the EIS. Everyone on the list also will receive notice when the Final EIS and ROD are available.

Appendix A of this EIS provides public involvement documentation related to the proposed project. Appendix B provides agency correspondence related to the proposed project.